

US009637018B2

(12) United States Patent Li et al.

(54) ROAD FOR CHARGING ELECTRIC VEHICLE

(71) Applicants: Ka Fat Li, Hong Kong (HK); Kwok Wah Pun, Hong Kong (HK)

(72) Inventors: **Ka Fat Li**, Hong Kong (HK); **Kwok Wah Pun**, Hong Kong (HK)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35

U.S.C. 154(b) by 120 days.

U.S.C. 134(b) by 120 day

(21) Appl. No.: 14/804,356

(22) Filed: Jul. 21, 2015

(65) Prior Publication Data

US 2016/0031337 A1 Feb. 4, 2016

(30) Foreign Application Priority Data

Jul. 29, 2014 (CN) 2014 2 0422312 U

(51)	Int. Cl.	
	H02J 7/00	(2006.01)
	B60M 1/00	(2006.01)
	H02G 5/04	(2006.01)
	B60M 1/18	(2006.01)
	B60M 1/30	(2006.01)
	B60L 11/18	(2006.01)
	B60L 5/40	(2006.01)
	B60L 5/38	(2006.01)
	B60L 5/39	(2006.01)
	B60M 1/34	(2006.01)

(52) U.S. Cl.

(10) Patent No.: US 9,637,018 B2

(45) **Date of Patent:**

May 2, 2017

(58) Field of Classification Search

CPC		B60L 11/1824
	320/107, 109; 191/13, 2	
		191/39
0 1: 4:	: C1	-1-1-1-1-4

See application file for complete search history. References Cited

U.S. PATENT DOCUMENTS

4,129,203	A *	12/1978	Berman B60L 5/36
7.600.621	B2 *	10/2009	104/145 Lohr B60L 5/40
, ,			104/140
7,748,509	B2 *	7/2010	Donnard B60L 5/40 104/140
8,763,773	B2 *	7/2014	Asplund B60L 5/40
9,199,541	B2*	12/2015	Asplund B60L 5/42

^{*} cited by examiner

(56)

Primary Examiner — Richard V Muralidar

(57) ABSTRACT

Disclosed is a road for charging electric vehicle. The road includes an electrified rail which includes an electrode plate for connecting an electric plate of the electric vehicle, an insulated cover covering on the plate electrode so as to prevent electric leakage and a neutral layer covering on the insulated cover for connecting a neutral electrode plate of the electric vehicle. The electrode plate includes a first electrode plate and a second electrode plate. The first electrode plate is disposed above the second electrode plate and between the first electrode plate and the second electrode plate there is a gap so that the electric plate of the electric vehicle is able to be sandwiched between the first electrode plate and the second electrode plate while charging. According to the present invention, the road surface is provided with electrified rail, thus the electric vehicle can charge while driving.

20 Claims, 10 Drawing Sheets

